



MEMO

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TO: Local Public Health Agencies and other Local Onsite Sewage Agencies
Environmental Public Health Specialist V's

THROUGH: Mary Glassburner, Chief
Bureau of Environmental Health Services

FROM: James Gaughan, P.E.
Onsite Sewage Program

SUBJECT: Expanded Polystyrene Aggregate Absorption Field Product

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The Department of Health and Senior Services' Onsite Sewage Program has reviewed the Flowtech product FTSG121H-1-OC. The FTSG121H-1-OC product consists of a 12-inch diameter cylindrical unit with a 4-inch diameter perforated plastic pipe surrounded by EPS (expanded polystyrene) aggregate encased in 180 degrees each of netting and of geotextile. The OC indicates that the 4-inch diameter pipe is offset in the 12-inch diameter unit so there is six inches of aggregate below the pipe. Units are usually used in 10-foot lengths; however, they are available from a minimum of five feet to a maximum of 20 feet in length. Units are connected using internal couplings. According to product specifications, the 4-inch perforated flexible plastic pipe meets the applicable required ASTM F405 Standard Specifications. Engineering reports conclude that multiple unit product configurations with 12 inches of compacted soil cover can be given a load rating of H-10. Also, engineering reports and calculations show that the open soil drainage area and storage volume below the drainage pipe in a trench are nearly comparable to that of a two-foot wide gravel and perforated pipe soil absorption trench. Following are general guidelines that should be used when reviewing an application for a proposed onsite system using this product.

Installation of the Flowtech product must comply with the minimum installation requirements for gravelless systems found in 19 CSR 20-3.060(5)(A)15, and with all manufacturer's specifications that do not conflict with the standards. Specifically, the site and soils must be classified as suitable or provisionally suitable for a conventional system or have an acceptable percolation rate, and the installation must maintain the required vertical separation to limiting soil conditions. The manufacturer's specifications require the product to be installed in 12-inch

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wide trenches. The most suitable backfill material available should be mounded over the trench to allow for settling and insure a minimum of 6 inches of soil cover.

DHSS does not endorse any brand or specific product model. However, systems using the Flowtech FTSG121H-1-OC product may be approved by local administrative authorities as part of an onsite wastewater treatment system when the proposed system design as a whole meets the requirements of the state minimum standards or local standards. Provided a proposed system design complies with the minimum standards, the minimum absorption trench sizing using this product should be based on the same minimum total length required for two-foot wide gravel and perforated pipe soil absorption trenches. Other Flowtech product configurations have not been reviewed and if proposed would be considered equivalent to a gravel and pipe trench system on a one-to-one square foot basis. Approval may be discontinued at any time if warranted by performance of installed systems in the field.

JEG: jms